In the Claims

Applicant has submitted a new complete claim set showing marked up claims with insertions indicated by underlining and deletions indicated by strikeouts and/or double bracketing.

Please cancel claims 2, 13-24, 26-37, 39-41 (including duplicate claims 39 and 41), 43-53, 55-75, 77-89 (including duplicate numbered claims 77-85 on pages 100-101), 91-95, 97-102 and 104-108 without prejudice or disclaimer. Claim 90 has been amended to correct typographical errors. New claims 109 and 110 have been added.

This listing of claims will replace all versions and listings of claims in the application.

1. (Original) A method of assessing sensitivity to a therapeutic agent in a subject with a chronic obstructive pulmonary disease (COPD) or asthma, comprising:

determining a genotype of the subject, wherein the genotype of the subject is defined by a nucleotide sequence of a region of at least one gene selected from the group consisting of: ALOX15, CRH, CRHR1, CRHR2, urocortin, stresscopin, SRP (stresscopin-related peptide), CRHBP, EGR1, GATA3, HSD11B1, HSD11B2, MAPK8, NFATC4, SCYA11 (Eotaxin), FCER2 (CD23), IL18BP, ACTH (POMC), STAT3, STAT5A, STAT6, TBX21 (TBET) and TGF-β, and wherein the presence of a sequence variation in the region of the at least one gene is indicative of sensitivity to the therapeutic agent.

2. (Canceled)

3. (Original) The method of claim 1, wherein the sequence variation is a single nucleotide polymorphism.

4. (Original) The method of claim 3, wherein the single nucleotide polymorphism is in a nucleotide sequence found in a region of CRHR1, wherein the nucleotide sequence comprises a polymorphism of rs1876828, rs242939 or rs242941.

5. (Original) The method of claim 1, wherein the sequence variation is selected from the group consisting of a deletion and insertion.

6. (Original) The method of claim 1, wherein the sequence variation indicates a haplotype.

7. (Original) The method of claim 6, wherein the haplotype is defined by a nucleotide sequence which comprises a polymorphism of rs1876828, rs242939 or rs242941.

8. (Original) The method of claim 7, wherein the haplotype is defined by a nucleotide sequence which comprises a polymorphism of rs1876828 or rs242939.

9. (Original) The method of claim 7, wherein the haplotype is defined by a nucleotide sequence which comprises a polymorphism of rs242939 and rs242941.

10. (Original) The method of claim 7, wherein the haplotype is defined by a nucleotide sequence which comprises a polymorphism of rs1876828 and rs242941.

11. (Original) The method of claim 7, wherein the haplotype is defined by a nucleotide sequence which comprises a polymorphism of rs1876828, rs242939 and rs242941.

12. (Original) The method of claim 11, wherein the haplotype is defined by a nucleotide sequence which comprises a polymorphism of rs1876828, rs242939 and rs242941, and wherein the haplotype is the GAT haplotype.

13.-24. (Canceled)

25. (Original) A method of assessing sensitivity to a corticosteroid or beta-agonist in a subject, comprising:

determining a genotype of the subject, wherein the genotype of the subject is defined by a nucleotide sequence of a region of at least one gene selected from the group consisting of: ALOX15, CRH, CRHR1, CRHR2, urocortin, stresscopin, SRP (stresscopin-related peptide), CRHBP, EGR1, GATA3, HSD11B1, HSD11B2, MAPK8, NFATC4, SCYA11 (Eotaxin), FCER2 (CD23), IL18BP, ACTH (POMC), STAT3, STAT5A, STAT6, TBX21 (TBET) and TGF-β, and wherein the presence of a sequence variation in the region of the at least one gene is indicative of sensitivity to the corticosteroid or beta-agonist.

26.-37. (Canceled)

38. (Original) A method of assessing sensitivity to a therapeutic agent in a subject with a chronic obstructive pulmonary disease (COPD) or asthma, comprising:

determining a genotype of the subject, wherein the genotype of the subject is defined by a nucleotide sequence of a region of NR3C1, and wherein the presence of a sequence variation in the region of NR3C1 is indicative of sensitivity to the therapeutic agent.

39.-41. (Canceled) **(Including duplicate claims 39 and 41)**

43.-53. (Canceled)

54. (Original) A method of assessing sensitivity to a therapeutic agent in a subject with chronic obstructive pulmonary disease (COPD) or asthma, comprising:

detecting the presence of a nucleic acid molecule in a biological sample from the subject, wherein the nucleic acid molecule is selected from the group consisting of nucleotide sequences of a region of a gene selected from the group consisting of: ALOX15, CRH, CRHR1, CRHR2, urocortin, stresscopin, SRP (stresscopin-related peptide), CRHBP, EGR1, GATA3, HSD11B1, HSD11B2, MAPK8, NFATC4, SCYA11 (Eotaxin), FCER2 (CD23), IL18BP, ACTH (POMC), STAT3, STAT5A, STAT6, TBX21 (TBET) and TGF-β, which contains a sequence variation,

(a) nucleotide sequences set forth as SEQ ID NOs: 1-88, 122-308 and 325-374, and

(b) fragments of (a), wherein the fragment of the nucleotide sequences contains a sequence variation,

and wherein the presence of a sequence variation in the nucleic acid molecule is indicative of sensitivity to the therapeutic agent.

55.-75. (Canceled)

76. (Original) A method of assessing sensitivity to a therapeutic agent in a subject with a chronic obstructive pulmonary disease (COPD) or asthma, comprising:

determining the presence of a mutant protein encoded by a nucleic acid molecule selected from the group consisting of:

nucleotide sequences of a region of a gene selected from the group consisting of: ALOX15, CRH, CRHR1, CRHR2, urocortin, stresscopin, SRP (stresscopin-related peptide), CRHBP, EGR1, GATA3, HSD11B1, HSD11B2, MAPK8, NFATC4, SCYA11 (Eotaxin), FCER2 (CD23), IL18BP, ACTH (POMC), STAT3, STAT5A, STAT6, TBX21 (TBET) and TGF-β, which contains a sequence variation,

(a) nucleotide sequences set forth as SEQ ID NOs: : 1-88, 122-308 and 325-374, and

(b) fragments of (b), which contain a sequence variation,

wherein the presence of the mutant protein is indicative of sensitivity to the therapeutic agent.

77.-89. (Canceled) **(Including duplicate claims 77-85 on pages 100-101)**

90. (Currently amended) A kit, comprising:

one or more nucleic acid probes that hybridize to at least one nucleic acid molecule selected from the group consisting of:

~~(g)~~ (a) nucleotide sequences of a region of a NR3C1, which contain a sequence variation,

~~(h)~~ (b) -nucleotide sequences set forth as SEQ ID NOs: 89-121 and 309-324, and

~~(i)~~ (c) fragments of (a), wherein the fragment of the nucleotide sequence contains a sequence variation, and

instructions for the use of the nucleic acid probes to correlate the presence of the at least one nucleic acid molecule with sensitivity to a therapeutic agent.

91.-95. (Canceled)

96. (Original) A kit, comprising:

one or more binding polypeptides that selectively bind to a mutant protein encoded by a nucleic acid molecule selected from the group consisting of:

(a) nucleotide sequences of a gene selected from the group consisting of: ALOX15, CRH, CRHR1, CRHR2, urocortin, stresscopin, SRP (stresscopin-related peptide), CRHBP, EGR1, GATA3, HSD11B1, HSD11B2, MAPK8, NFATC4, SCYA11 (Eotaxin), FCER2 (CD23), IL18BP, ACTH (POMC), STAT3, STAT5A, STAT6, TBX21 (TBET) and TGF-β, which contain a sequence variation,

(b) nucleotide sequences set forth as SEQ ID NOs: 1-88, 122-308 and 325-374, and

(c) fragments of (a) and (b), wherein the fragment of the nucleotide sequence contains a sequence variation, and

instructions for the use of the one or more binding polypeptides to correlate the presence of the mutant protein with sensitivity to a therapeutic agent.

97.-102. (Canceled)

103. (Original) A nucleic acid microarray comprising at least two different nucleic acid molecules that hybridize to a nucleotide sequence selected from the group consisting of

(a) nucleotide sequences of a region of a gene selected from the group consisting of: ALOX15, CRH, CRHR1, CRHR2, urocortin, stresscopin, SRP (stresscopin-related peptide), CRHBP, EGR1, GATA3, HSD11B1, HSD11B2, MAPK8, NFATC4, SCYA11 (Eotaxin), FCER2 (CD23), IL18BP, ACTH (POMC), STAT3, STAT5A, STAT6, TBX21 (TBET) and TGF-β, which contain a sequence variation,

(b) nucleotide sequences set forth as SEQ ID NOs: 1-88, 122-308 and 325-374 and

(c) fragments of (a), wherein the fragment of the nucleotide sequence contains a sequence variation,

and wherein the at least two nucleic acid molecules are fixed to a solid subtrate.

104.-108. (Canceled)

109. (New) A kit, comprising:

one or more nucleic acid probes that hybridize to at least one nucleic acid molecule selected from the group consisting of:

(a) nucleotide sequences of a region of a gene selected from the group consisting of: ALOX15, CRH, CRHR1, CRHR2, urocortin, stresscopin, SRP (stresscopin-related peptide), CRHBP, EGR1, GATA3, HSD11B1, HSD11B2, MAPK8, NFATC4, SCYA11 (Eotaxin), FCER2 (CD23), IL18BP, ACTH (POMC), STAT3, STAT5A, STAT6, TBX21 (TBET) and TGF-□, which contain a sequence variation,

(b) nucleotide sequences set forth as SEQ ID NOs: : 1-88, 122-308 and 325-374, and

(c) fragments of (a), wherein the fragment of the nucleotide sequence contains a sequence variation, and

instructions for the use of the nucleic acid probes to correlate the presence of the at least one nucleic acid molecule with sensitivity to a therapeutic agent.

110. (New) A kit, comprising:

one or more nucleic acid probes that hybridize to at least one nucleic acid molecule selected from the group consisting of:

(a) nucleotide sequences of a region of a NR3C1, which contain a sequence variation,

(b) nucleotide sequences set forth as SEQ ID NOs: 89-121 and 309-324, and

(c) fragments of (a), wherein the fragment of the nucleotide sequence contains a sequence variation, and

instructions for the use of the nucleic acid probes to correlate the presence of the at least one nucleic acid molecule with sensitivity to a therapeutic agent.